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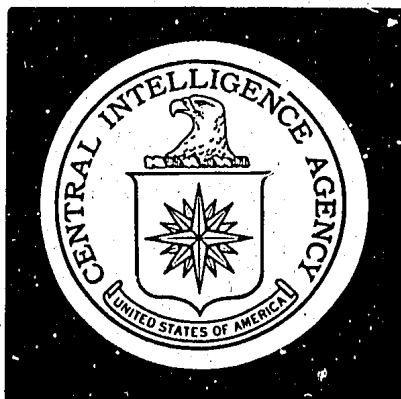
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DIRECTORATE OF
INTELLIGENCE

Intelligence Memorandum

Communist China: Prospects For Oil Exports

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September 1971

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
September 1971

INTELLIGENCE MEMORANDUM

COMMUNIST CHINA:
PROSPECTS FOR OIL EXPORTS

Summary

1. Recent evidence supports earlier judgments that by 1975 Communist China may have as much as 10 million metric tons of petroleum available for annual export, worth US \$250 million at projected prices. In the last few months the Chinese have taken a number of visiting delegations through a large new petroleum plant, the Peking General Petrochemical Works located about 40 miles outside the city.

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2. The inclusion of the Peking plant in the list of approved "show places" and the expressed willingness to export oil reflect the rapid growth of China's petroleum industry over the past several years and the leadership's confidence in the future of the industry. By 1965, China had achieved self-sufficiency in petroleum, and between 1965 and 1970 the supply of petroleum for domestic consumption more than doubled. China can now produce a complete range of petroleum products, from gasoline to coke, and some petrochemicals for the manufacture of consumer chemical or plastic end products. The most striking effect of these developments has been the substantial growth in the use of petroleum-powered vehicles and equipment.

3. Because of the continued high priority of the petroleum industry under the Fourth Five-Year Plan (1971-75), production of crude oil could reach 40 million tons in 1975, compared with 18 million tons in 1970. Military requirements will continue to receive first priority in the allocation of the expanding supplies. The increased supplies will also be used to further the modernization of the economy, particularly the heavy industrial and agricultural sectors.

Note: This memorandum was prepared by the Office of Economic Research and coordinated within the Directorate of Intelligence.

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4. Crude petroleum and petroleum products will be a useful addition to China's presently limited array of exports and could contribute substantially to hard currency earnings in the 1970s. The most logical customer would be Japan, where the demand for imported crude oil is expected to increase by 100 million tons by 1975. Sales of petroleum products to various less developed countries could also earn valuable foreign exchange and contribute to Chinese political advantage. Western Europe is a less promising market because of high transportation costs.

DiscussionBackground

5. Following the rehabilitation of the few small petroleum facilities taken over in 1949 from the Chinese Nationalists, the new Chinese Communist leadership directed its efforts to a long-range program to develop a modern industry and to become self-sufficient in petroleum. During the First Five-Year Plan (1953-57) and the Great Leap Forward (1958-60), extensive efforts were made to locate and develop new oilfields and to expand and modernize refining facilities.⁽¹⁾

6. These early efforts provided a sound base for the spectacular expansion of the past decade. Despite the collapse of the Leap Forward and the upheavals of the Cultural Revolution (1966-69), the industry continued to maintain its high priority in the allocation of China's economic resources. Crude oil production and refining capacity continued to expand throughout the 1960s, with comparable increases in the quantity, variety, and quality of petroleum products. China's position in the world petroleum scene has changed from that of a negligible producer to one of rank similar to Mexico or smaller Middle Eastern producers such as Oman and Qatar.

7. Total production of crude oil in Communist China in 1970 is estimated at 18 million tons, or quadruple the 1960 production of 4.6 million tons, as shown in Table 1. The rate of production by the end of the year undoubtedly approached the figure of 20 million tons quoted by Chou En-lai to the American author Edgar Snow late in 1970. Claims of sizable production increases at various petroleum facilities have continued during 1971. Preliminary estimates indicate that the output of crude oil in 1971 will be about 23 million tons.

8. The Ta-ch'ing oilfield in Northeast China continues to set the pace for the industry and provides about 60% of the total output of crude

1. *The main facilities of China's petroleum industry are shown on the map.*

Table 1
Communist China:
Production of Crude Oil, by Producing Area a/

	Thousand Metric Tons										
	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Natural crude oil	3,400	3,500	4,000	4,300	5,700	6,800	8,800	9,100	10,000	12,900	16,800
Sheng-li						100	300	200	600	800	1,000
Sinkiang b/	1,000	1,000	900	500	700	800	1,300	1,000	1,000	1,200	1,400
Ta-ch'ing	100	500	1,000	1,700	2,800	3,500	4,500	5,400	5,800	7,900	10,800
Tsaidam Basin	300	200	300	300	300	300	300	250	250	300	300
Yu-men	1,800	1,700	1,700	1,700	1,800	2,000	2,300	2,200	2,300	2,500	2,900
Other c/	100	100	100	100	100	100	100	50	50	200	400
Synthetic and shale oil d/	1,200	1,000	1,100	1,200	1,200	1,200	1,200	900	1,000	1,100	1,200
Total crude oil	4,600	4,500	5,000	5,500	5,900	8,000	10,000	10,000	11,000	14,000	18,000

a. Because of rounding, components may not add to the totals shown.

b. Primarily from the Karamai oilfield which began commercial production in 1958.

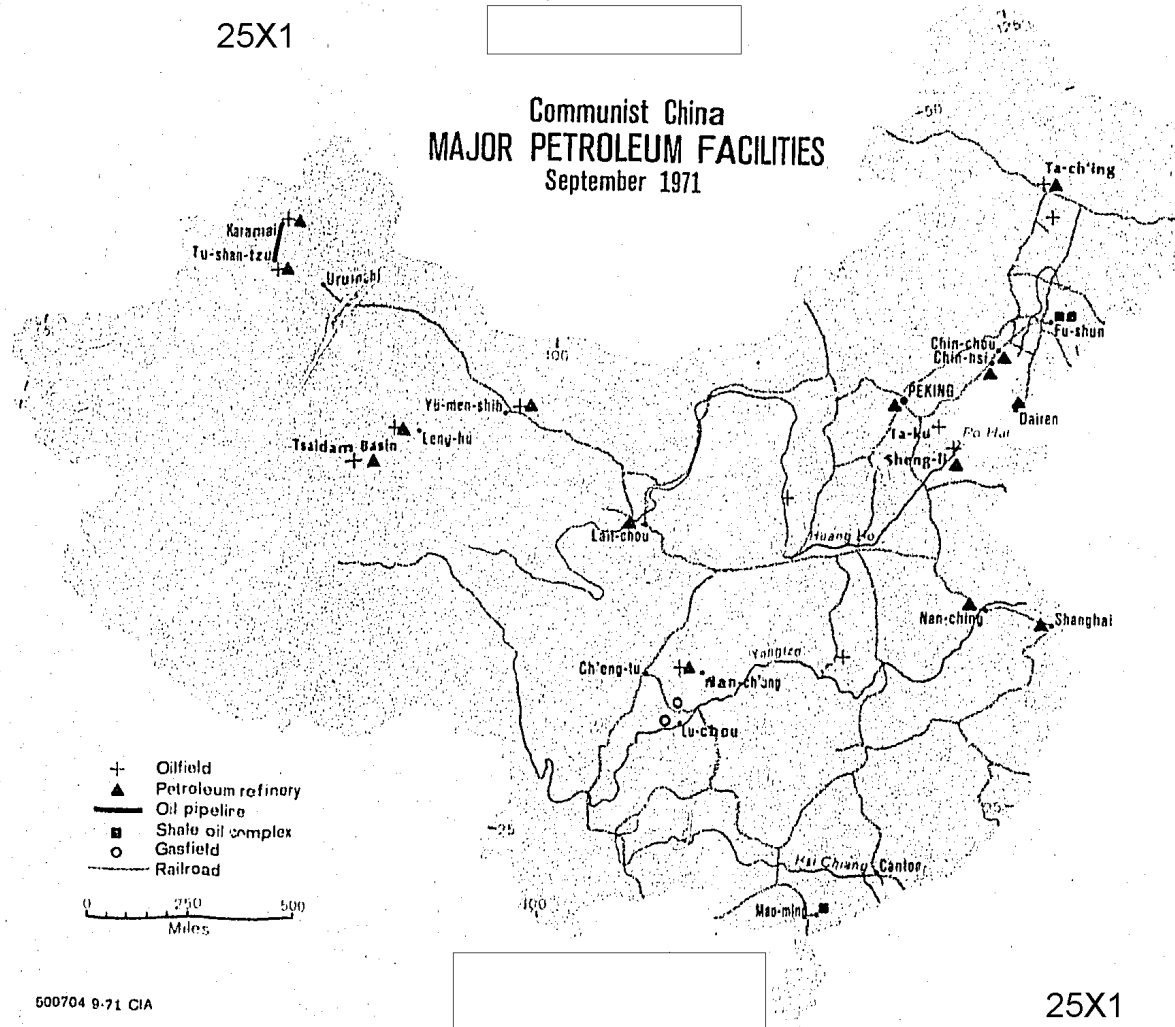
c. Including oilfields in Szechuan Province, which began production in 1958, and new areas under development in 1969 and 1970.

d. Primarily shale oil from the Fu-shun plants in Northeast China. Small quantities of shale oil have also been produced at Mao-ming in Kwangtung Province since 1959; production of petroleum from coal is negligible and is being phased out at the old Japanese facilities in Northeast China.

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oil. Other major producers are the older Karamai and Yu-men oilfields in the Northwest and the Sheng-li oilfield in Shantung Province. A number of smaller fields and the shale oil facilities at Fu-shun in the Northeast and Mao-ming in the South continue in production; their combined output is probably less than 10% of the total. New sources of production apparently are under investigation or development in off-shore areas in Po Hai (Gulf of Chih-li) and in several provinces, including Kirin, Hu-peh, and Tsinghai.

9. The new Peking refinery – which has become a showpiece for foreign visitors⁽²⁾ – is representative of a number of new refining complexes that have been constructed in China since 1960 to keep pace with the

2. A list of foreign visitors to the Peking refinery, with the dates of the visits, is shown in Table 2.

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Table 2

Communist China:
Visitors to the Peking General Petrochemical Works

Date of Visit	Visiting Group
4 June 1971	Party and government delegation from Romania, led by Nicolae Ceausescu, general secretary of the Romanian Communist Party.
Early July 1971 <u>a/</u>	Delegation of the Australian Labor Party, led by Gough Whitlam.
11 July 1971	Party and government delegation from North Korea, led by Kim Chung-nin, member of the Political Committee and secretary of the Central Committee of the Korean Workers Party.
22 July 1971	Government delegation from Algeria, led by Abdelaziz Bouteflika, member of the Algerian Council of Revolution and Minister of Foreign Affairs.
10 August 1971	Economic delegation from North Korea, led by Vice Premier Chong Chun-taek.
Early September 1971 <u>a/</u>	Government delegation from Sweden, led by Rune Johansson, Minister of Industry.

a. Exact day of visit not reported.

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increasing availability of crude oil. At the end of 1960, China had about ten major refineries in operation, with a combined capacity estimated at almost 7.5 million tons.⁽³⁾ Since that time the major Ta-ch'ing refinery, "designed and constructed" entirely by the Chinese, and several other new refineries have been completed⁽⁴⁾ while older refineries have been modernized and expanded. With the inclusion of the Peking refinery, which will have an annual capacity of 2.5 million tons, China is estimated to have at least 18 refineries in operation. The combined capacity of these refineries at the end of 1971 is expected to total 25 million tons at the minimum.

Trends in Consumption

10. The remarkable growth of China's petroleum industry since 1960 resulted in the achievement of self-sufficiency in petroleum by 1965 and in a sharp rise in the availability of petroleum between 1965 and 1970. Imports of petroleum, which accounted for about 40% of total supply in 1960, declined to less than 5% of total supply by 1965, and have remained at that level. The imports are largely motivated by political considerations. About 60,000 tons of petroleum products are imported from Romania; much smaller amounts come from the USSR. Crude oil in varying amounts is also imported from Albania and, more recently, from Egypt.

11. Supplies of petroleum during the period 1960-65 remained relatively constant in the range of 7-7.5 million tons as increased production was offset by declining imports. Between 1965 and 1970, however, the supply of petroleum products for domestic consumption increased from 7.3 million tons to 16.3 million tons.

12. This sharply increased supply of petroleum, although still small by Western and Japanese standards,⁽⁵⁾ is causing important changes in almost every sector of the economy and is contributing to the general modernization of the society. The leadership, however, continues its strict control over the allocation and consumption of petroleum. Available supplies are channeled to priority users, and recurrent campaigns are mounted for the conservation of petroleum by every consumer.

3. *The ten refineries were located at Lan-chou, Shanghai, T'u-shan-tzu, Fu-shun, Yu-men, Chin-hsi, Dairen, Chin-chou, Leng-hu, and Nan-ch'ung. Various small refineries are included in the total capacity estimate.*

4. *These include refineries at Nan-ching and Mao-ming, additional refineries at Fu-shun and in the Tsaidam Basin and Sinkiang, and a refinery in Shantung Province.*

5. *The total supply in 1970 would have kept the Japanese economy going for about 30 days.*

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13. A major sector of the economy affected by the increased availability of petroleum is transportation, which probably accounts for the largest share of petroleum consumption in China. Since 1965, sizable additions to inventory have occurred in most types of transport equipment (trucks, ships, and diesel locomotives), and the development and improvement of transportation facilities (roads, railroads, inland waterways, and maritime shipping) have received priority in recent years. In addition to the growth of petroleum-consuming equipment in the transport sector, the increased amount of petroleum that must be moved has generated increased activity in the production and acquisition of tankers and tank cars. The railroad tank car fleet is estimated to have grown from 20,000 cars in 1965 to 34,000 cars at the end of 1970, with the average capacity per car somewhat greater in 1970.

14. The growth of petroleum supplies since 1965 has also been reflected in the agricultural sector in the increasing availability and use of petroleum-powered equipment such as tractors, diesel and gasoline engines, and irrigation and drainage equipment. Petroleum is also beginning to contribute to agriculture and other sectors of the economy through the nascent petrochemical industry. The new Peking plant includes facilities for the production of synthetic rubber, using petroleum feedstocks. Other petrochemical facilities in China are using petroleum (including natural gas) as the basis for the production of chemical fertilizer, textiles, plastics, insecticides, and other chemical products.

15. Increased petroleum supplies have clearly played a key role in the improvement of China's defense posture in recent years. No current estimate of military consumption is available, but it seems certain that the estimated consumption level of about 1 million tons in 1963 has more than doubled. Sizable amounts of petroleum products almost certainly have been set aside as a military reserve.

16. In addition to the major areas outlined above, there has also been some increase in the use of petroleum in general industrial applications, such as fuel for thermal powerplants and industrial boiler fuel, and in the household sector, for lighting, heating, and cooking. These uses, however, probably represent only a small part of total supply, with households, in particular, having the lowest priority.

17. Since 1965 there has been no significant effect on China's foreign trade as a result of the increase in petroleum availability. As noted earlier, China's petroleum imports are minuscule. In recent years, China reportedly has begun to supply small quantities of petroleum to such countries as Albania, North Korea, and North Vietnam. Some petroleum coke has been exported to Japan in the past few years, and small quantities of such items as petroleum jelly have gone to other Free World countries.

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Prospects for the Industry

18. The striking growth of the petroleum industry in recent years has been the direct result of the high priority placed on its development by the regime. If, as seems certain, this high priority is sustained, crude oil production in China - which increased at an average annual rate of almost 18% from 1965 through 1970 - could reach 40 million tons by 1975 compared with 18 million tons in 1970. China also has demonstrated its capacity to construct the required additions to refining capacity and to expand its capacity for transporting increased volumes of petroleum. Moreover, the regime has maintained a strict control of consumption.

19. The strategic advantages of China's improved oil position are certainly paramount in the minds of the leadership, and military needs will continue to receive first priority. At the same time, the regime will continue to use the increased availability of petroleum to speed up the overall modernization of the economy. Over the next few years, the range of uses will be broadened to ensure maximum exploitation of increased supplies, although the regime will surely continue to encourage frugal use.

20. One key area which could increase substantially its use of petroleum supplies is the petrochemical industry. Over the next few years, this industry could make important contributions to the expansion of China's modern industrial base and to its modern weapons programs. As the industry develops, petroleum can increasingly replace scarce agricultural products, such as grain and potatoes, as the main source for China's production of alcohols, glycerin, and other organic chemicals. Similarly, petroleum-based synthetic fibers could be used to augment production of natural fibers and ease the regime's chronic problem of clothing its large and rapidly growing population. A significant increase in the use of petroleum to produce chemical fertilizer - more than half of which, on a nutrient basis, now comes from imports - would represent a more efficient use of resources as well as a saving of foreign exchange. All of these avenues of exploitation probably will be developed in some degree in the next five years. Requirements for capital investment, however, and the necessity for continued construction of facilities limit the rate at which the petrochemical uses can be expanded.

Trade Prospects

21. A more immediate effect of the continued growth of the petroleum industry could be China's emergence as a petroleum exporter, On the psychological level, the switch from an oil deficit nation to an oil exporter could be propagandized as a superb example of the correctness of the Chinese approach to the economic problems of underdeveloped nations. The uses

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of oil exports to further Chinese political objectives are already clear from China's ongoing exports of petroleum products to such allies as Albania, North Korea, and North Vietnam. On economic grounds, the addition of crude oil and a variety of petroleum products to China's presently limited array of export commodities could lead to increased export earnings and significantly improve China's overall trading position. The rate at which hard currency earnings can be expanded in the 1970s is especially important to China since the machinery and technology imported from hard currency areas constitutes the "cutting edge" of its industrialization.

22. China regularly achieves a balance in its trade with Communist countries and with non-Communist countries as a whole. Trade with individual countries may show either substantial surpluses or deficits. In 1970, for example, China ran a trade deficit with Western Europe of slightly more than \$300 million and with Japan of \$345 million. China's trade with Hong Kong, Singapore, and the less developed countries provides the hard currency earnings necessary to offset these trade deficits.⁽⁶⁾ Chinese exports of crude oil and petroleum products will be important, not so much for reducing these deficits as for enabling China to step up its aggregate purchases of advanced equipment and technology from leading industrial nations.

23. Exportable surpluses of petroleum in 1971 would be at the most only token amounts. Such exports would probably consist of spot shipments and would be offered primarily for political purposes. By 1975, however, China might have available for export as much as 10 million tons of petroleum annually. Based on anticipated prices, such a quantity of oil would be worth approximately \$250 million on the world market.

24. While the expected growth in world consumption of petroleum suggests a ready market for China's oil in many areas, the most logical destinations would be the Asian nations, notably Japan - China's most important trading partner and the area's largest consumer of petroleum. Demand for crude oil in Japan - practically all of which is imported - is projected to be about 330 million tons in 1975, or 100 million tons greater than the 1971 demand. In spite of Japan's continued efforts to increase its own participation in crude oil production in areas outside Japan, such as the Middle East and Indonesia, it still must rely on imported oil. China's ability to offer a regular supply of crude oil, with the added

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attraction of a very short transportation haul, would facilitate its entry into the Japanese market. Furthermore, because China is an excellent customer for Japanese goods and runs a substantial deficit in its Japanese trade, China has a strong case for Japanese purchases of petroleum.

25. Despite the obvious advantages to both sides of the Japanese market for crude oil, China might well choose to export some petroleum in the form of products, which generally command a higher price. The existence of well-organized petroleum markets in Western Europe and the distances involved in Chinese shipments to Europe militate against Chinese entry into that market. The more likely markets for petroleum products would be some of the less developed countries, where Chinese petroleum sales could contribute both to additional export earnings and to improvement of China's political position.

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